Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) A phase-change optical recording medium capable of carrying out record/ readout/ erase operations of information data through the reversible phase transition between amorphous and crystalline states induced by light beam irradiation in a recording layer included in said recording medium, comprising:

a transparent substrate on which the light beam is incident; and

contiguous layers formed on said substrate in order as follows, a lower dielectric protective layer, said recording layer, an upper dielectric protective layer, and a reflective/ heat dissipating layer; wherein

said upper dielectric protective layer essentially consists of a mixture of ZnS, ZrO_2 and SiO_2, having a composition of ~~$(ZrO_2)_{100-x}(SiO_2)_x$, where $0 < x <$ 60~~ $(ZnS)_x(ZrO_2)_y(SiO_2)_{100-x-y}$, where $30 < x < 70$ and $30 < y < 70$ (mole %).

2. (original) The phase-change optical recording medium according to claim 1,

wherein said upper dielectric protective layer has a thermal conductivity of at most 2W/ mK.

3. (original) The phase-change optical recording medium according to

claim 1,

wherein said reflective/ heat dissipating layer essentially consists of a material selected from the group consisting of Ag and Ag alloys.

4. (original) The phase-change optical recording medium according to claim 1,

wherein said recording layer essentially consists of Sb and Te, as major ingredients, further consisting of at least three kinds of elements selected from a group consisting of Ag, In, Ge and Ga, having a composition of $X_\alpha Sb_\beta Te_{100-\alpha-\beta}$, with X being at least three kinds of elements above mentioned, where $0 < \alpha < 15$, and $65 < \beta < 80$ (atom %).

5. (original) The phase-change optical recording medium according to claim 1,

wherein said recording medium is operable at a linear velocity of equal to, or larger than 7 m/sec during recording.

6. (original) A phase-change optical recording medium capable of suitably carrying out record/ readout/ erase operations of information data through the reversible phase transition between amorphous and crystalline states induced by light beam irradiation in a recording layer included in said recording medium, comprising:

a transparent substrate on which the light beam is incident; and

contiguous layers formed on said substrate in order as follows, a lower dielectric protective layer, said recording layer, a first upper dielectric protective layer, a second upper dielectric protective layer, and a reflective/ heat dissipating layer; wherein

said first upper dielectric protective layer essentially consisting of a mixture of ZnS, ZrO_2 and SiO_2, having a composition of $(ZnS)_x (ZrO_2)_y (SiO_2)_{100-x-y}$, where $30 < x < 70$ and $30 < y < 70$ (mole %).

7. (original) The phase-change optical recording medium according to claim 6,

wherein said second upper dielectric protective layer essentially consists of SiC.

8. (original) The phase-change optical recording medium according to claim 6,

wherein said first upper dielectric protective layer has a thermal conductivity of at most 2W/ mK.

9. (original) The phase-change optical recording medium according to claim 6,

wherein said recording layer essentially consists of Sb and Te, as major ingredients, further consisting of at least two kinds of elements selected from a group consisting of Ag, In and Ge, having a composition of $X_\alpha Sb_\beta Te_{100-\alpha-\beta}$,

with X being at least two kinds of elements above mentioned, where $0 < \alpha < 15$, and $60 < \beta < 80$ (atom %).

10. (original) The phase-change optical recording medium according to claim 6,

wherein said reflective/ heat dissipating layer essentially consists of a material selected from the group consisting of Ag and Ag alloys.

11. (original) The phase-change optical recording medium according to claim 6,

wherein said recording medium is operable at a linear velocity of equal to, or larger than 7 m/ sec during recording.

12. (currently amended) A phase-change optical recording medium, comprising:

a reflective/ heat dissipating layer provided contiguously to at least one surface of a recording layer, having a dielectric protective layer interposed between said reflective/ heat dissipating layer and said recording layer;

wherein said recording layer essentially consists of a phase-change recording material having a Sb_3Te meta-stable phase, said dielectric protective layer essentially consists of a dielectric material containing ZrO_2 as a major ingredient and has a composition of $(ZrO_2)_{100-x}(CrO_2)_x$, where $0 \leq x \leq 50$ (mole %), and said reflective/ heat dissipating layer essentially consists of Ag, as a

major ingredient.

13. (original) The phase-change optical recording medium according to claim 12,

wherein said dielectric material, which contains ZrO_2 as a major ingredient, is stabilized zirconia.

Claim 14 (canceled).

15. (original) The phase-change optical recording medium according to claim 12,

wherein said reflective/ heat dissipating layer essentially consisting of Ag-Cu alloys having a compositional ratio of $0.1 \leq Cu/Ag \leq 10$ (mole ratio).

16. (previously presented) The phase-change optical recording medium according to claim 12,

wherein said recording layer is formed to be interposed between said dielectric protective layers each essentially consisting of said dielectric material, which contains ZrO_2 as a major ingredient.